Sequence Listing

SEQ ID NO: 1

GGCACGAGGCTTCTGGCCAGGGAACGTGGAAGGCGCACCGACAGGGATCCGGCCAGGGAG 60
GGCGAGTGAAAGAAGGAAATCAGAAAGGAAGGGAGTTAACAAAATAATAAAAACAGCCTG 120
AGCCACGGCTGGAGAGACCGAGACCCGGCGCAAGAGAGCGCAGCCTTAGTAGGAGAGGAA 180
CGCGAGACGCGGCAGCGCAGAGCGCGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGC 240
AGGCGCCGCAGCTGAGACCGGCGGCCGACGGCCAGCCCTCAGGGGGCGGTCACAAGTCAG 300
CGCCCAAGCAAGTCAAGCGACAGCGCTCGTCTTCGCCCGAACTGATGCGCTGCAAACGCC 360
GGCTCAACTTCAGCGGCTTTGGCTACAGCCTGCCGCAGCAGCAGCCGGCCGCCGTGGCGC 420
GCCGCAACGAGCGCGAGCGCAACCGCGTCAAGTTGGTCAACCTGGGCTTTGCCACCCTTC 480
GGGAGCACGTCCCCAACGGCGCGGCCAACAAGAAGATGAGTAAGGTGGAGACACTGCGCT 540
CGGCGGTCGAGTACATCCGCGCGCTGCAGCAGCTGCTGGACGAGCATGACGCGGTGAGCG 600
CCGCCTTCCAGGCAGGCGTCCTGTCGCCCACCATCTCCCCCAACTACTCCAACGACTTGA 660
ACTCCATGGCCGGCTCGCCGGTCTCATCCTACTCGTCGGACGAGGGCTCTTACGACCCGC 720
TCAGCCCCGAGGAGCAGGAGCTTCTCGACTTCACCAACTGGTTCTGAGGGGCTCGGCCTG 780
GTCAGGCCCTGGTGCGAATGGACTTTGGAAGCAGGGTGATCGCACAACCTGCATCTTTAG 840
TGCTTTCTTGTCAGTGGCGTTGGGAGGGGGAGAAAAGGAAAAGAAAAAAAAAGAAGAAGA 900
AGAAGAAAAGAGAAGAAGAAAAAAACGAAAACAGTCAACCAACCCCATCGCCAACTAAGC 960
GAGGCATGCCTGAGAGACATGGCTTTCAGAAAACGGGAAGCGCTCAGAACAGTATCTTTG 1020
CACTCCAATCATTCACGGAGATATGAAGAGCAACTGGGACCTGAGTCAATGCGCAAAATG 1080
CAGCTTGTGTGCAAAAGCAGTGGGCTCCTGGCAGAAGGGAGCAGCACACGCGTTATAGTA 1140
ACTCCCATCACCTCTAACACGCACAGCTGAAAGTTCTTGCTCGGGTCCCTTCACCTCCCC 1200
GCCCTTTCTTAGAGTGCAGTTCTTAGCCCTCTAGAAACGAGTTGGTGTCTTTCGTCTCAG 1260
TAGCCCCCACCCCAATAAGCTGTAGACATTGGTTTACAGTGAAACTATGCTATTCTCAGC 1320
CCTTTGAAACTCTGCTTCTCCTCCAGGGCCCGATTCCCAAACCCCATGGCTTCCCTCACA 1380
CTGTCTTTTCTACCATTTTCATTATAGAATGCTTCCAATCTTTTGTGAATTTTTTATTAT 1440
AAAAAATCTATTTGTATCTATCCTAACCAGTTCGGGGATATATTAAGATATTTTTGTACA 1500
TAAGAGAGAAAGAGAGAGAAAAATTTATAGAAGTTTTGTACAAATGGTTTAAAATGTGTA 1560
TATCTTGATACTTTAACATGTAATGCTATTACCTCTGCATATTTTAGATGTGTAGTTCAC 1620
CTTACAACTGCAATTTTCCCTATGTGGTTTTGTAAAGAACTCTCCTCATAGGTGAGATCA 1680
AGAGGCCACCAGTTGTACTTCAGCACCAATGTGTCTTACTTTATAGAAATGTTGTTAATG 1740
TATTAATGATGTTATTAAATACTGTTCAAGAAGAACAAAGTTTATGCAGCTACTGTCCAA 1800
ACTCAAAGTGGCAGCCAGTTGGTTTTGATAGGTTGCCTTTTGGAGATTTCTATTACTGCC 1860
TTTTTTTTCTTACTGTTTTATTACAAACTTACAAAAATATGTATAACCCTGTTTTATACA 1920
AACTAGTTTCGTAATAAAACTTTTTCCTTTTTTTAAAATG 1960

SEQ ID NO: 2

Met Arg Cys Lys Arg Arg Leu Asn Phe Ser 10
Gly Phe Gly Tyr Ser Leu Pro Gln Gln Gln 20
Pro Ala Ala Val Ala Arg Arg Asn Glu Arg 30
Glu Arg Asn Arg Val Lys Leu Val Asn Leu 40
Gly Phe Ala Thr Leu Arg Glu His Val Pro 50
Asn Gly Ala Ala Asn Lys Lys Met Ser Lys 60
Val Glu Thr Leu Arg Ser Ala Val Glu Tyr 70
Ile Arg Ala Leu Gln Gln Leu Leu Asp Glu 80
His Asp Ala Val Ser Ala Ala Phe Gln Ala 90
Gly Val Leu Ser Pro Thr Ile Ser Pro Asn 100
Tyr Ser Asn Asp Leu Asn Ser Met Ala Gly 110
Ser Pro Val Ser Ser Tyr Ser Ser Asp Glu 120
Gly Ser Tyr Asp Pro Leu Ser Pro Glu Glu 130
Gln Glu Leu Leu Asp Phe Thr Asn Trp Phe 140

SEQ ID NO: 3

GGCACGAGGCTTCTGGCCAGGGAACGTGGAAGGCGCACCGACAGGGATCCGGCCAGGGAG 60
GGCGAGTGAAAGAAGGAAATCAGAAAGGAAGGGAGTTAACAAAATAATAAAAACAGCCTG 120
AGCCACGGCTGGAGAGACCGAGACCCGGCGCAAGAGAGCGCAGCCTTAGTAGGAGAGGAA 180
CGCGAGACGCGGCAGAGCGCGTTCAGCACTGACTTTTGCTGCTGCTTCTGCTTTTTTTTT 240
TCTTAGAAACAAGAAGGCGCCAGCGGCAGCCTCACACGCGAGCGCCACGCGAGGCTCCCG 300
AAGCCAACCCGCGAAGGGAGGAGGGGAGGGAGGAGGAGGCGGCGTGCAGGGAGGAGAAAA 360
AGCATTTTCACTTTTTTTGCTCCCACTCTAAGAAGTCTCCCGGGGATTTTGTATATATTT 420
TTTAACTTCCGTCAGGGCTCCCGCTTCATATTTCCTTTTCTTTCCCTCTCTGTTCCTGCA 480
CCCAAGTTGGTCAACCTGGGCTTTGCCACCCTTCGGGAGCACGTCCCCAACGGCGCGGCC 540
AACAAGAAGATGAGTAAGGTGGAGACACTGCGCTCGGCGGTCGAGTACATCCGCGCGCTG 600
CAGCAGCTGCTGGACGAGCATGACGCGGTGAGCGCCGCCTTCCAGGCAGGCGTCCTGTCG 660
CCCACCATCTCCCCCAACTACTCCAACGACTTGAACTCCATGGCCGGCTCGCCGGTCTCA 720
TCCTACTCGTCGGACGAGGGCTCTTACGACCCGCTCAGCCCCGAGGAGCAGGAGCTTCTC 780
GACTTCACCAACTGGTTCTGAGGGGCTCGGCCTGGTCAGGCCCTGGTGCGAATGGACTTT 840
GGAAGCAGGGTGATCGCACAACCTGCATCTTTAGTGCTTTCTTGTCAGTGGCGTTGGGAG 900
GGGGAGAAAAGGAAAAGAAAAAAAAAGAAGAAGAAGAAGAAAAGAGAAGAAGAAAAAAAC 960
GAAAACAGTCAACCAACCCCATCGCCAACTAAGCGAGGCATGCCTGAGAGACATGGCTTT 1020
CAGAAAACGGGAAGCGCTCAGAACAGTATCTTTGCACTCCAATCATTCACGGAGATATGA 1080
AGAGCAACTGGGACCTGAGTCAATGCGCAAAATGCAGCTTGTGTGCAAAAGCAGTGGGCT 1140
CCTGGCAGAAGGGAGCAGCACACGCGTTATAGTAACTCCCATCACCTCTAACACGCACAG 1200
CTGAAAGTTCTTGCTCGGGTCCCTTCACCTCCCCGCCCTTTCTTAGAGTGCAGTTCTTAG 1260
CCCTCTAGAAACGAGTTGGTGTCTTTCGTCTCAGTAGCCCCCACCCCAATAAGCTGTAGA 1320
CATTGGTTTACAGTGAAACTATGCTATTCTCAGCCCTTTGAAACTCTGCTTCTCCTCCAG 1380
GGCCCGATTCCCAAACCCCATGGCTTCCCTCACACTGTCTTTTCTACCATTTTCATTATA 1440
GAATGCTTCCAATCTTTTGTGAATTTTTTATTATAAAAAATCTATTTGTATCTATCCTAA 1500
CCAGTTCGGGGATATATTAAGATATTTTTGTACATAAGAGAGAAAGAGAGAGAAAAATTT 1560
ATAGAAGTTTTGTACAAATGGTTTAAAATGTGTATATCTTGATACTTTAACATGTAATGC 1620
TATTACCTCTGCATATTTTAGATGTGTAGTTCACCTTACAACTGCAATTTTCCCTATGTG 1680
GTTTTGTAAAGAACTCTCCTCATAGGTGAGATCAAGAGGCCACCAGTTGTACTTCAGCAC 1740
CAATGTGTCTTACTTTATAGAAATGTTGTTAATGTATTAATGATGTTATTAAATACTGTT 1800
CAAGAAGAACAAAGTTTATGCAGCTACTGTCCAAACTCAAAGTGGCAGCCAGTTGGTTTT 1860
GATAGGTTGCCTTTTGGAGATTTCTATTACTGCCTTTTTTTTCTTACTGTTTTATTACAA 1920
ACTTACAAAAATATGTATAACCCTGTTTTATACAAACTAGTTTCGTAATAAAACTTTTTC 1980
CTTTTTTTAAAATG 1994

SEQ ID NO: 4

Met Ser Lys Val Glu Thr Leu Arg Ser Ala 10
Val Glu Tyr Ile Arg Ala Leu Gln Gln Leu 20
Leu Asp Glu His Asp Ala Val Ser Ala Ala 30
Phe Gln Ala Gly Val Leu Ser Pro Thr Ile 40
Ser Pro Asn Tyr Ser Asn Asp Leu Asn Ser 50
Met Ala Gly Ser Pro Val Ser Ser Tyr Ser 60
Ser Asp Glu Gly Ser Tyr Asp Pro Leu Ser 70
Pro Glu Glu Gln Glu Leu Leu Asp Phe Thr 80
Asn Trp Phe 83

SEQ ID NO: 5

GGCACGAGGCTTCTGGCCAGGGAACGTGGAAGGCGCACCGACAGGGATCCGGCCAGGGAG 60
GGCGAGTGAAAGAAGGAAATCAGAAAGGAAGGGAGTTAACAAAATAATAAAAACAGCCTG 120
AGCCACGGCTGGAGAGACCGAGACCCGGCGCAAGAGAGCGCAGCCTTAGTAGGAGAGGAA 180
CGCGAGACGCGGCAGAGCGCGTTCAGCACTGACTTTTGCTGCTGCTTCTGCTTTTTTTTT 240
TCTTAGAAACAAGAAGGCGCCAGCGGCAGCCTCACACGCGAGCGCCACGCGAGGCTCCCG 300
AAGCCAACCCGCGAAGGGAGGAGGGGAGGGAGGAGGAGGCGGCGTGCAGGGAGGAGAAAA 360
AGCATTTTCACTTTTTTTGCTCCCACTCTAAGAAGTCTCCCGGGGATTTTGTATATATTT 420
TTTAACTTCCGTCAGGGCTCCCGCTTCATATTTCCTTTTCTTTCCCTCTCTGTTCCTGCA 480
CCCAAGTTCTCTCTGTGTCCCCCTCGCGGGCCCCGCACCTCGCGTCCCGGATCGCTCTGA 540
TTCCGCGACTCCTTGGCCGCCGCTGCGCATGGAAAGCTCTGCCAAGATGGAGAGCGGCGG 600
CGCCGGCCAGCAGCCCCAGCCGCAGCCCCAGCAGCCCTTCCTGCCGCCCGCAGCCTGTTT 660
CTTTGCCACGGCCGCAGCCGCGGCGGCCGCAGCCGCCGCAGCGGCAGCGCAGAGCGCGCA 720
GCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGGCGCCGCAGCTGAGACCGGCGGCCGA 780
CGGCCAGCCCTCAGGGGGCGGTCACAAGTCAGCGCCCAAGCAAGTCAAGCGACAGCGCTC 840
GTCTTCGCCCGAACTGATGCGCTGCAAACGCCGGCTCAACTTCAGCGGCTTTGGCTACAG 900
CCTGCCGCAGCAGCAGCTGCTGGACGAGCATGACGCGGTGAGCGCCGCCTTCCAGGCAGG 960
CGTCCTGTCGCCCACCATCTCCCCCAACTACTCCAACGACTTGAACTCCATGGCCGGCTC 1020
GCCGGTCTCATCCTACTCGTCGGACGAGGGCTCTTACGACCCGCTCAGCCCCGAGGAGCA 1080
GGAGCTTCTCGACTTCACCAACTGGTTCTGAGGGGCTCGGCCTGGTCAGGCCCTGGTGCG 1140
AATGGACTTTGGAAGCAGGGTGATCGCACAACCTGCATCTTTAGTGCTTTCTTGTCAGTG 1200
GCGTTGGGAGGGGGAGAAAAGGAAAAGAAAAAAAAAGAAGAAGAAGAAGAAAAGAGAAGA 1260
AGAAAAAAACGAAAACAGTCAACCAACCCCATCGCCAACTAAGCGAGGCATGCCTGAGAG 1320
ACATGGCTTTCAGAAAACGGGAAGCGCTCAGAACAGTATCTTTGCACTCCAATCATTCAC 1380
GGAGATATGAAGAGCAACTGGGACCTGAGTCAATGCGCAAAATGCAGCTTGTGTGCAAAA 1440
GCAGTGGGCTCCTGGCAGAAGGGAGCAGCACACGCGTTATAGTAACTCCCATCACCTCTA 1500
ACACGCACAGCTGAAAGTTCTTGCTCGGGTCCCTTCACCTCCCCGCCCTTTCTTAGAGTG 1560
CAGTTCTTAGCCCTCTAGAAACGAGTTGGTGTCTTTCGTCTCAGTAGCCCCCACCCCAAT 1620
AAGCTGTAGACATTGGTTTACAGTGAAACTATGCTATTCTCAGCCCTTTGAAACTCTGCT 1680
TCTCCTCCAGGGCCCGATTCCCAAACCCCATGGCTTCCCTCACACTGTCTTTTCTACCAT 1740
TTTCATTATAGAATGCTTCCAATCTTTTGTGAATTTTTTATTATAAAAAATCTATTTGTA 1800
TCTATCCTAACCAGTTCGGGGATATATTAAGATATTTTTGTACATAAGAGAGAAAGAGAG 1860
AGAAAAATTTATAGAAGTTTTGTACAAATGGTTTAAAATGTGTATATCTTGATACTTTAA 1920
CATGTAATGCTATTACCTCTGCATATTTTAGATGTGTAGTTCACCTTACAACTGCAATTT 1980
TCCCTATGTGGTTTTGTAAAGAACTCTCCTCATAGGTGAGATCAAGAGGCCACCAGTTGT 2040
ACTTCAGCACCAATGTGTCTTACTTTATAGAAATGTTGTTAATGTATTAATGATGTTATT 2100
AAATACTGTTCAAGAAGAACAAAGTTTATGCAGCTACTGTCCAAACTCAAAGTGGCAGCC 2160
AGTTGGTTTTGATAGGTTGCCTTTTGGAGATTTCTATTACTGCCTTTTTTTTCTTACTGT 2220

TTTATTACAAACTTACAAAAATATGTATAACCCTGTTTTATACAAACTAGTTTCGTAATA 2280
AAACTTTTTCCTTTTTTTAAAATG 2304

SEQ ID NO: 6

Met Glu Ser Ser Ala Lys Met Glu Ser Gly 10
Gly Ala Gly Gln Gln Pro Gln Pro Gln Pro 20
Gln Gln Pro Phe Leu Pro Pro Ala Ala Cys 30
Phe Phe Ala Thr Ala Ala Ala Ala Ala Ala 40
Ala Ala Ala Ala Ala Ala Ala Gln Ser Ala 50
Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln 60
Gln Gln Ala Pro Gln Leu Arg Pro Ala Ala 70
Asp Gly Gln Pro Ser Gly Gly Gly His Lys 80
Ser Ala Pro Lys Gln Val Lys Arg Gln Arg 90
Ser Ser Ser Pro Glu Leu Met Arg Cys Lys 100
Arg Arg Leu Asn Phe Ser Gly Phe Gly Tyr 110
Ser Leu Pro Gln Gln Gln Leu Leu Asp Glu 120
His Asp Ala Val Ser Ala Ala Phe Gln Ala 130
Gly Val Leu Ser Pro Thr Ile Ser Pro Asn 140
Tyr Ser Asn Asp Leu Asn Ser Met Ala Gly 150
Ser Pro Val Ser Ser Tyr Ser Ser Asp Glu 160
Gly Ser Tyr Asp Pro Leu Ser Pro Glu Glu 170
Gln Glu Leu Leu Asp Phe Thr Asn Trp Phe 180